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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/731,457	12/09/2003	Sung-Hyuk Shin	I-2-0445.1US	4654

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EXAMINER

ODOM, CURTIS B

ART UNIT	PAPER NUMBER
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2611

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/12/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

57

Office Action Summary	Application No. 10/731,457	Applicant(s) SHIN ET AL.	
	Examiner Curtis B. Odom	Art Unit 2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7-10 and 14 is/are allowed.
- 6) ☒ Claim(s) 1-6, 11-13 and 15-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 1, 2, 4-6, 18, 19, and 21 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claims recite limitations which apply to mathematical operations, but do not recite a practical application within the body of the claim. The claims simply recite obtaining measurements and utilizing the measurements to determine an estimate. MPEP 2106.02 [R-5] states

Claims to processes that do nothing more than solve mathematical problems or manipulate abstract ideas or concepts are complex to analyze and are addressed herein. If the “acts” of a claimed process manipulate only numbers, abstract concepts or ideas, or signals representing any of the foregoing, the acts are not being applied to appropriate subject matter. *Gottschalk v. Benson*, 409 U.S. 63, 71 - 72, 175 USPQ 673, 676 (1972). Thus, a process consisting solely of mathematical operations, i.e., converting one set of numbers into another set of numbers, does not manipulate appropriate subject matter and thus cannot constitute a statutory process.

In practical terms, claims define nonstatutory processes if they:

– consist solely of mathematical operations without some claimed practical application (i.e., executing a “mathematical algorithm”); or

– simply manipulate abstract ideas, e.g., a bid (Schrader, 22 F.3d at 293-94, 30 USPQ2d at 1458-59) or a bubble hierarchy (Warmerdam, 33 F.3d at 1360, 31 USPQ2d at 1759), without some claimed practical application.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-6, 11-13, and 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson (US 2005/0003846) in view of Sakoda et al. (U. S. Patent No. 6, 411, 662).

Regarding claim 1, Anderson et al. discloses a method for determining uplink power requirements for a transceiver in a wireless communication system, comprising the step of

obtaining first measurements (see section 0021) from a beacon signal occupying a first timeslot in a frame and utilizing the measurement to determine a path loss. Anderson does not disclose obtaining second measurements from at least one additional channel having a known transmitted signal strength and occupying a second timeslot in the frame; and utilizing the first and second measurements to determine a path loss estimate.

However, Sakoda et al. discloses obtaining a transmission power of transmission (column 9, lines 31-39) of a traffic channel (see column 4, lines 45-50) occupying a timeslot (see Figs. 1 and 2) in a frame, wherein the transmission power is predetermined (see column 5, lines 32-40)

Art Unit: 2611

and obtaining second measurements from a control channel (see column 6, lines 23-50) having a predetermined signal strength (see column 5, lines 32-40) and occupying another timeslot in the frame (see Figs. 1 and 2, and column 5, lines 23-31) and utilizing the first and second measurements to determine a path loss estimate (see column 10, lines 31-39). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify the path loss estimate of Anderson with the teachings of Sakoda et al. since Sakoda et al. states path loss calculation can allow the for an optimal base station to be found to communicate with a mobile station (see column 10, lines 39-45).

Regarding claim 2, Anderson further discloses utilizing the path loss to determine uplink (user) timeslot transmission power (see sections 0022 and 0037-0039).

Regarding claim 3, Anderson further discloses the power control calculation is made to each timeslot (see section 0034).

Regarding claim 4, Sakoda et al. discloses obtaining further measurements from a timeslot in the frame different from the first and second timeslots by averaging values for several time slots (see column 10, lines 31-39); and utilizing the measurements from the time slots to obtain a further path loss estimate (see column 10, lines 31-39). It would have been obvious to include this feature since Sakoda et al. states path loss calculation can allow the for an optimal base station to be found to communicate with a mobile station (see column 10, lines 39-45).

Regarding claim 5, Anderson discloses the beacon signal is transmitted using TDD-CDMA. Sakoda et al. further discloses the control channel is transmitted using TDMA (see column 3, lines 36-39). It would have been obvious to include this feature of the control channel

Art Unit: 2611

since Sakoda et al. states path loss calculation can allow the for an optimal base station to be found to communicate with a mobile station (see column 10, lines 39-45).

Regarding claim 6, Anderson discloses obtaining a received signal code power measurement (see section 0021).

Regarding claims 11-13, the claimed invention includes limitations corresponding to the above rejection of claims 1-3, which is applicable hereto.

Regarding claims 18-21, the claimed invention includes limitations corresponding to the above rejection of claims 1-4, which is applicable hereto.

5. Claims 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakoda et al. (U. S. Patent No. 6, 411, 662) in view of Zhang et al. (U. S. Patent No. 7, 151, 740).

Regarding claim 15, Sakoda et al. discloses an apparatus (see Fig. 11) for determining uplink power requirements for a transceiver in a wireless system having timeslot separation (as shown in Figs. 1 and 2) between uplink and downlink timeslots in a wireless communication system, comprising: a base station, having a circuit for transmitting a traffic (beacon) channel and a control channel (see column 4, lines 45-50) at known transmission power levels (see column 5, lines 32-40) and a receiver to determine a path loss estimate based on received signals (see column 10, lines 31-39). Sakoda et al. does not disclose the receiver includes a measurement circuit for measuring the received the power of the known channel and the additional channel, and a circuit for calculating the path loss based upon the measured values and the transmission power levels.

However, Zhang et al. discloses determining a path loss for controlling the uplink transmit power in a communication system (see column 5, lines 16-35). The path loss estimate is

Art Unit: 2611

based on a measured received strength of multiple channels of known (transmission) power (see column 11, lines 16-21). The (uplink) transmission power level is then adjusted based on the path loss (see column 11, lines 22-26). Therefore, it would have been obvious to obtain a path loss estimate based on multiple channels in Sakoda et al. as described by Zhang et al. since Zhang et al. states controlling the transmission power level maintains constant signal power level (see column 9, lines 43-50).

Regarding claim 16, Zhang et al. further discloses employing path loss to control uplink signal power (see column 5, lines 16-35). It would have been obvious to include this feature since Zhang et al. states controlling the transmission power level maintains constant signal power level (see column 9, lines 43-50).

Regarding claim 17, Sakoda et al. discloses a wireless transmit/receive unit (WTRU) for use in slotted communications, the WTRU comprising:

a circuit (see column 6, lines 23-31) for receiving a traffic (beacon) channel and an additional control channel of known transmission power (see column 5, lines 32-40) and a path loss measurement circuit for obtaining a path loss measurement of the control channel (see column 10, lines 31-45). Sakoda et al. does not disclose obtaining a path loss measurement of the traffic channel of known value; and a circuit for providing a transmitted power adjustment in accordance with the path loss measurements.

However, Zhang et al. discloses determining a path loss for controlling the uplink transmit power in a communication system (see column 5, lines 16-35). The path loss estimate is based on a measured received strength of multiple channels of known (transmission) power (see column 11, lines 16-21). The (uplink) transmission power level is then adjusted based on the

Art Unit: 2611

path loss (see column 11, lines 22-26). Therefore, it would have been obvious to obtain a path loss estimate of multiple channels in Sakoda et al. as described by Zhang et al. since Zhang et al. states controlling the transmission power level maintains constant signal power level (see column 9, lines 43-50).

Allowable Subject Matter

6. Claims 7-10 and 14 are allowable over prior art references because related references do not disclose receiving a power offset and RSCP of multiple channels and determining a path loss from these parameters.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Curtis B. Odom whose telephone number is 571-272-3046. The examiner can normally be reached on Monday- Friday, 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2611

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'Curtis Odom', with a large, stylized loop at the end.

Curtis Odom
March 5, 2007